CHAPTER I
INTRODUCTION

1.1. Research Background

The world economies have grown the fastest in the last few decades which have been marked with a high rate of new business formation (Damodaran, 2009). The USA was able to generate much more rapid economic growth than Western Europe during the 1990s, primarily because of the growth of small, new technology companies as they spur productivity, efficiency and contributing to a country's overall competitiveness (Cumming, Johan and Zhang, 2014).

There were more than 170 venture backed Unicorn (privately owned company with valuation of more than one Billion US dollar) in April 2018 which was significant improvement from mere 45 Unicorns back in January 2014 (Austin, Canipe and Slobin, 2016). Based on a study commissioned by the Kauffmann Foundation, high-technology startups have created most of the new jobs from 2000 to 2010 in the US (Fairlie, 2012).

Clayton Christensen *et al.* (2015) argued that radical innovation that disrupted traditional economic mechanisms was unlikely to come from established firms since they would have conflict of interest and have too much to lose from the innovation. It is more likely to come from startup companies that have little to lose. The startup is the catalyst that transforms ideas into

products and widely recognized as an essential enabler towards competitiveness (Asmoro, Nugroho and Selo, 2018).

Another study by A.T. Kearney and Google (2017) indicated that South East Asia (SEA) is the world fastest growing internet region with an existing internet user base of 260m growing to ~480m users by 2020. Consequently, the SEA Internet economy is expected to grow to ~$200+ billion by 2025 driven mostly by the growth of first-hand e-Commerce market, online travel and fintech (financial technology). Fintech has a big market in Indonesia because it was reported that only 36% of Indonesian people have bank accounts based on study by Indonesia Fintech Association in 2018 (Hendriyani and Raharja, 2018). It has started to disrupt traditional financial institutions' business although it does not occur in commercial banks yet (Singapurwoko, 2019).

There are few growth-driving factors in SEA namely a burgeoning young population with ~70% under the age of 40, access particularly difficult in remote islands which are abundant in country like Indonesia and rapidly growing middle-class (forecasted GDP growth of 5.3% over next 10 years). Within SEA, Singapore remains the main hub in terms of startup development, but other countries are quickly catching up, with Indonesia leading the way. In 2015, Indonesia and Singapore comprised ~60% of deal value of total $10.1B investment made in 2017.

"*There are fewer topics more cloaked in mystery, black magic and aspiration than valuation. People regularly speak of inflated valuations—or insane valuations—but it is difficult to know what anchors the numbers.*" (Vetter, 2016). Startup is raw companies that have an innovative idea that develops into a high-growth company (Spinelli and Adams, 2011). Startup is newly created companies with little or no history facing high volatility in technologies and markets (Giardino *et al.*, 2014).

The startup companies' founding team mostly do not have enough financial capital to grow their business and so they need investor. Valuation is central matter and negotiation point between founding team and investors on the investment amount as typically in exchange of percentage of equity that founders want to give out (Cumming and Dai, 2011). Valuations placed by investors on startups will impact the extent of equity shares dispensed to raise adequate assets to guarantee firm survival and growth. (Zheng, Liu and George, 2010). Startup valuation determined the equity allotment of investors and the entrepreneur hence is key factor in determining the investment yield for both parties (Bell, 2014). For

There are few articles around valuation models mostly around traditional companies by using common techniques such as Discounted Cash Flow (DCF) and not many around digital startups especially at its early stage as shown below.

Table 1. Research Gap on Company Valuation

Researchers	Research Topic	Method of Analysis	Gaps
(Falik, Lahti and Keinonen, 2016)	Valuation selection criteria from founders' point of view in choosing Venture Capital as investor	Descriptive Statistics and Regression Analysis Over 163 observations	Valuation from investors' point of view
(Brealey, Myers and Allen, 2006)	Challenges in early stage company valuation	Literature Review	If non-traditional valuation method such as Real Options would be applicable for early stage digital startup in Indonesia context
(Damodaran, 2009)	Standard valuation techniques do not work on young companies	Literature Review	
(Miloud, Aspelund and Cabrol, 2012)	Early stage startup valuation by venture capitalist	Regression analysis	Applicability to other types of investors than venture capitalist

The concept of early stage startup is very well developed in Eric Ries' The Lean Startup (Reis, 2011), where he explained that a startup is a continuous process of finding what the right product for the targeted market is. To do so, the company is constantly in a "Boucle-Build-Learn" process: depending on its results, the company will build new very simple products just to validate the visions it has on the market. At the end of this process, it can decide to accelerate in the same direction, to abandon the product, or to "pivot", meaning a complete shift in the features of the product sold. Through this constant path of innovation, the company will progressively have a clear idea of the right product for the market.

This step-by-step approach is key towards funding process knowns as "the stepping stones method" that was largely developed by Dermot Berkery (Berkery, 2008). He explained that the entrepreneur should identify different steps for his project, and only find enough funds to get to the next stepping stone. This leads to the need to have a different 'volatility' in each stage of the stage or stepping stone of early stage digital startups.

As per Falik, Lahti and Keinonen (2016), there are few selection criteria from startups founders' point of view in choosing the right investors as partner namely: valuation, terms and conditions, value-added services, reputation, skill and independence, personal compatibility and ease of deal making. They concluded that the less experienced entrepreneurs in early stage startup to be more concerned about valuation when selecting investor than their more experienced counterparts. It is important to understand if the investors would also have similar point of view on valuation selection criteria to invest (investability) and if the model could be replicated elsewhere such as for Indonesia early stage digital startup scene.

As problematic as valuation is for the ongoing enterprise, the task of valuation for the startup assumes Nostradamus-like proportions due to the new venture's lack of a deep history of financial activity or other reliable forecasting metrics. Startup valuation in the investor point of view such as venture capital (VC) context is often said to be more art than science (Köhn, 2018). Valuing companies early in the life cycle is difficult and subjective, partly because of the absence of operating history, financial information and

partly because most young firms do not make it through these early stages to success (Brealey, Myers and Allen, 2006; Damodaran, 2009). As a result, many of the standard techniques used to estimate cash flows, growth rates and discount rates either do not work or yield unrealistic numbers. In addition, the fact that most young companies do not survive has to be considered somewhere in the valuation (Damodaran, 2009).

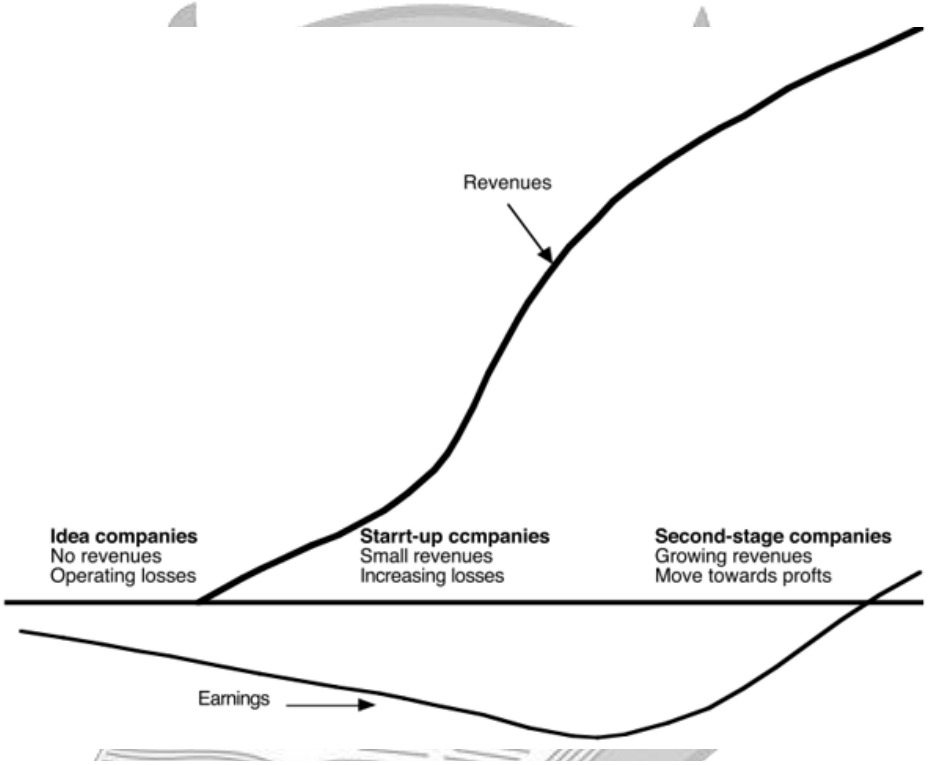

Figure 1. Early Stage of Startups Companies (Damodaran, 2009)

Unlike investment methods and strategy of Venture Capital or other institutional investors, investment decision model and strategies in early stage startups are under-researched (Miloud, Aspelund and Cabrol, 2012). This is deemed to indicate potential gap that warrant further research to cover other

types of investors than venture capitalist and its applicability for Indonesia early stage digital startup scene.

It is at the interest of researcher to understand what would entice investors in investing in the early stage startup even before reviewing their detail background and product or services, despite knowing the inherent risks coming from such venture (Ruhnka and Young, 1991; Damodaran, 2009) especially in Indonesia context. Hence there is a need to have something in place as necessary condition prior valuation towards investment decision in early stage digital startups ('investability prospect').

1.2. Research Objectives

The main research objective is to examine the relationship between startup's investability prospect or readiness as dependent variable and factors impacting the readiness for a startup to be invested (independent variable) for Indonesia digital startups. It is to potentially solve the impending problem and answering questions in coming up with a reasonable and objective post-money valuation that would improve the success rate of the invested startup (Clercq *et al.*, 2006; Bell, 2014). Success is typically measured by financial success or profit and startup's fundraising (Nalintippayawong, 2019). It has been researched extensively that improper valuation would be a detrimental factor towards founders' motivation and could create potential bottleneck for the future investment (Zacharakis, Erikson and George, 2010).

1.3. Research Questions

Problem is any situation where a gap exist between the actual and the desired ideal state (Sekaran, 2003). It has been heavily researched that investing in a new venture (early stage startup) involves a high degree of risk of failure and uncertainties (Ruhnka and Young, 1991). Song et al.(2010) even postulated that half of new venture fail within first two years of its inception.

It is at best a tug-of-war between investor (mostly experienced, savvy and confident) and the entrepreneur (mostly inexperienced, naïve and desperate) with neither party particularly satisfied with the resulting valuation nor confident that the inherent value of the enterprise has been determined appropriately and left both parties embittered (Miloud, Aspelund and Cabrol, 2012; Bell, 2014). One of the most important of challenges is information asymmetry in which when one party has information the other party lacks and cannot easily acquire (Janet Smith, Richard Lester Smith, Richard Smith, 2011).

The need to understand the typical investability decision making process for early stage startup which normally does not have enough financial related information such as revenues. This makes a typical business valuation method would be challenging (Goldman, 2008).

Digital startup phenomena is rather new in Indonesia (Davies and Silviana, 2018) hence the subject is not heavily researched unlike in other

countries (Rodriguez, 2006; Ding, Sun and Au, 2014). As the focus is on early stage startup that typically does not have enough traction and financial information or figures, a typical business investability decision making and valuation model might not be applicable.

Based on research background and potential research gaps, the researcher postulated problem as known difficulties or challenges in using traditional valuation model for investment in early stage Indonesia digital startup as key driver in the decision process to invest in the startup (Goldman, 2008). In other words, there is a need to assess startup's investability (readiness for investment) level by using non-traditional valuation model.

Gartner described 'digital' as the representation of physical items or activities through binary code (*Gartner digital glossary*, 2019). It refers to the use of technologies to improve organizational processes, to improve interaction between people, organization, and things; and to make new business mode. Digital startup is the new company that embraces new technology innovation as key business differentiator. It is also at times referred as 'Tech startup' which means founders with novel business ideas that uses technologies and business model to facilitate a rapid growth (Nalintippayawong, 2019). It is different than typical new traditional ventures such as setting up new factory, physical store outlet or restaurant.

The research will only focus on Indonesia based early stage digital startups regardless the background of the investors and founders. Early stage

startup refers to those that receive initial or seed funding from external investor minimum one time when it was incorporated less than three years (Davila and Foster, 2007; Robehmed, 2013). Another common characteristic of early stage startup is inability to generate sales (pre-revenue) when they commence the business. The research will not cover Indonesia based investor or founders who invest in or setup overseas startup. Traditional and non-digital startup will not be explored in detail as part of the research.

The researcher plans to focus on samples taken from population of investors and digital startups' founders in few major cities of Indonesia. The expectation that is this research still meeting the hallmark of a scientific research in the area of transferability and to construct the previously unknown phenomenon (Sugiarto, 2017b) to similar social situation or context such as other developing countries.

The researcher postulates that startup's investability prospect score or readiness is a determinant factor to assess the readiness for early stage digital startup to receive investment. The idea was derived from similar research conducted on bankruptcy-prediction context that resulted in Altman's Z-score (Altman, 1968) as early stage digital startup also exhibits a high risk (Damodaran, 2009) that would lead towards whether the possibility of bankruptcy (Samkin, 2012; Bae and Lee, 2020).

The main research question is if there is any categorical difference of factors that would influence a startup to receive funding or not (Investability

Prospect Score or IPS). The following is the list of items to be addressed in this research that is to understand the independent variables that might influence IPS as dependent variable. It mostly departed from the model used by venture capital (Miloud, Aspelund and Cabrol, 2012) could also be applied towards other investors' investment in the context of early stage Indonesia digital startups:

1. What is the impact of startup's industry structure towards its investability prospect score?
2. What is the impact of startup's product or service maturity towards its investability prospect score?
3. What is the impact of the background and structure of startup founders' management team towards its investability prospect score?
4. What is the impact of startup's financial robustness towards its investability prospect score?
5. What is the impact of startup's risk management profile towards its investability prospect score?

1.4. Research Benefits

Academic literature around startups is not only very limited but they are also highly fragmented with no well-structured conceptual framework that integrate empirical research accordingly (Reinfeld, 2018). The main intended benefit of the research is to produce new theoretical model by exploring theory gap and to produce new concept around investability prospect score as

determinant factor towards investment in Indonesia early stage digital startups.

1.4.1. Practical Benefits

This research is also aimed to offer practical contribution around investment in early stage digital startup scene. Investors could consider factors or variables in this research, in addition to or as alternatives of the typical intuitive 'gut-feeling' and subjective approach when making the right decision to potentially invest and the valuation involved (Goldman, 2008). Investors are able to use it to assess the risks and opportunities in investing in startups (Nalintippayawong, 2019). New investors with investing experience around 1-3 years would normally consider many factors before making decision to invest, whereas a seasoned investor would use less factors (Christanti and Mahastanti, 2011).

As the focus is on early stage startup that typically does not have enough traction and financial information or figures, a typical business valuation model might not be applicable (Miloud, Aspelund and Cabrol, 2012; Bell, 2014). Hence there is a need to have something in place as necessary condition prior valuation towards investment decision in early stage digital startups.

Startup founders would also be able to review the readiness by looking at the investability prospect score model prior approaching potential investors. This would increase the potential to be invested by proposing a

more reasonable valuation that would be enough for the company to build the products and gaining traction, without losing too much equity unnecessarily especially in the beginning of the ventures. By understanding the common variables, the founders could also use it to choose the right type of industry and business model that would produce better valuation and a higher chance of success. In other words, it provides a guideline for startups to improve their businesses (Nalintippayawong, 2019).

By later combining with non-traditional valuation method such as real option method as sufficient condition, the investors as the buyer of the option does not have to be always right as they would only lose small portion of his capital (premium). The potential profit can even be maximized further by using certain strategy in option such as buying call and put option at the same time (straddle or strangle strategies) or insurance strategy (covered call or protective put). This would entice investors to invest in risky assets such as startups by adopting such option strategies. Startup founders could also focus more in growing the company with the proper capital support from the investors.

1.4.2. Theoretical Benefits

The researcher hopes to contribute to body of knowledge especially in corporate valuation and capital budgeting, by contributing a general understanding in formulating an investability prospect score as determinant factor towards investment in the early stage digital startups that could be used by investors and startup founders.

This research is also intended to provide empirical conclusion around investability prospect score for companies with similar traits of early stage digital startup as unit of analysis. The researcher hopes to trigger further and more in-depth future research around this subject by leveraging variables used in this research.

1.5. Writing Systematic

This dissertation is organized in five chapters which later are organized in respective sub-chapters. Chapter one covers important aspects around why this research is performed. It covers the phenomena of the recent development around digital startups including in Indonesia. It then followed by defining the problem that is aimed to be addressed by basing on identified research gaps. Research problems which later led to detail research questions are to be answered by using empirical research method. The researcher also hoped this research would provide both theoretical and practical benefits for both investors and startup's founders.

Chapter two covers theoretical background to derive concepts or constructs which later produces variables to be used as part of empirical research model. In this chapter, literature review will be used to cover relevant grounded and middle range theories to identify opportunity to synthesize new theory. Hypotheses between variables (independent, mediating, moderating and dependent) will be described as baseline for the following chapter around research method.

Chapter three will cover research methodology around steps to collect, organize, process, and analyze data from the identified research object and unit analysis. This chapter also covers the technique to be used in testing the validity and reliability of the model.

Chapter four will attempt to provide answer to research questions by describing research results in detail. In this chapter, respective variable will be analyzed and its relationship with the used grounded theories.

Chapter five will cover conclusion, managerial implications and suggestion for next research around valuation model in early stage digital company in Indonesia or other countries.